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# SEQUENCE LISTING

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<120> Recombinant Monoclonal Antibody Specific for  
Phosphotyrosine-Containing Proteins

<130> 724650-3

<140> U.S. 09/653,755

<141> 2000-09-01

<160> 12

<170> PatentIn Ver. 2.1

<210> 1

<211> 1365

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:cDNA for heavy  
chain of recombinant antibody

<400> 1

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tcttcgagga cttctgcata cacattcact gaaaacaccg tgcactgggt gaagcagagc 120
catggagaga gccttgagtg gattggagggt attaatcctt actatggtgg ttctatcttc 180
agcccgaagt tcaagggcaa ggccacattg actgtagaca agtcctccag cacagcctac 240
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gtgactctgg gatgcctggg caagggctac ttccctgagt cagtgactgt gacttggaac 480
tctggatccc tgtccagcag tgtgcacacc ttcccagctc tctgcagtc tggactctac 540
actatgagca gctcagtgac tgtccctcc agcacctggc caagtcagac cgtcacctgc 600
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atttcaaaa tcaaccctg tctccatgc aaggagtgtc acaaagccc agtcctaac 720
ctcagagggtg gaccatccgt cttcatcttc cctccaaata tcaaggatgt actcatgac 780
tccctgacac ccaaggtcac gtgtgtggtg gtggatgtga gcgaggatga cccagacgtc 840
cagatcagct ggtttgtgaa caacgtggaa gtacacacag ctcagacaca aaccataga 900
gaggattaca acagtactat ccgggtgggtc agcacctcc ccatccagca ccaggactgg 960
atgagtggca aggagttcaa atgcaaggtc aacaacaaag acctcccatc acccatcgag 1020
agaaccatct caaaaattaa agggctagtc agagctccac aagtatacat cttgccgcca 1080
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cctggagaca tcagtgtgga gtggaccagc aatgggcata cagaggagaa ctacaaggac 1200
accgcaccag tcctggactc tgacggttct tacttcatat atagcaagct caatatgaaa 1260
acaagcaagt gggagaaaac agattccttc tcatgcaacg tgagacacga ggggtctgaaa 1320
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<210> 2

<211> 645

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:cDNA for light  
chain of recombinant antibody

<400> 2

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tcagggtgct cccccaaact ctggatttat agcacatcca acttggcttc tggagtccct 180
gctcgtttca gtggcagtggt gtctgggacc tcttactctc tcacaatcag cagtgtggag 240
gctgaagatg ctgccactta ttactgccag cagtacagtg gttaccggac gttcgggtgga 300
ggcaccaagc tggaaatcaa acgggctgat gctgcaccaa ctgtatccat ctccccacca 360
tccagtgagc agttaacatc tggaggtgcc tcagtcgtgt gcttcttgaa caacttctac 420
cccagagaca tcaatgtcaa gtggaagatt gatggcagtg aacgacaaaa tgggtgtcctg 480
aacagttgga ctgacagga cagcaaagac agcacctaca gcatgagcag caccctcaca 540
ttgaccaagg acgagtatga acgacataac agctatacct gtgaggccac tcacaagaca 600
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<210> 3

<211> 1389

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence:cDNA for heavy  
chain of recombinant antibody with 3'-histidine  
tag sequence

<400> 3

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tcctgcagga cttctgcata cacattcact gaaaacaccg tgcaactgggt gaagcagagc 120
catggagaga gccttgagtg gattggaggt attaatacctt actatgggtggt ttctatcttc 180
agcccgaagt tcaagggcaa ggccacattg actgtagaca agtcctccag cacagcctac 240
atggagctcc gcagcctgac atctgaggat tctgcagtct attactgtgc aagaagggct 300
ggggcgtact actttgacta ctggggccaa ggcaccactc tcacagtctc ctcagccaaa 360
acaacacccc catcagtcta tccactggcc cctgggtgtg gagataaac tggttcctcc 420
gtgactctgg gatgcctggt caagggctac ttccctgagt cagtgactgt gacttggaaac 480

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tctggatccc tgtccagcag tgtgcacacc ttcccagctc tcctgcagtc tggactctac 540  
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 agcgttgctc acccagccag cagcaccacg gtggacaaaa aacttgagcc cagcggggccc 660  
 atttcaacaa tcaaccctg tcttccatgc aaggagtgtc acaaagtcac agtcctaac 720  
 ctctgagggtg gaccatccgt cttcatcttc cctccaaata tcaaggatgt actcatgac 780  
 tccctgacac ccaagggtcac gtgtgtggtg gtggatgtga gcgaggatga cccagacgtc 840  
 cagatcagct ggtttgtaa caacgtggaa gtacacacag ctcagacaca aacctataga 900  
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 agaaccatct caaaaattaa agggctagtc agagctccac aagtatacat cttgccgcca 1080  
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 acaagcaagt gggagaaaac agattccttc tcatgcaacg tgagacacga gggctgaaa 1320  
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 caccattga 1389

<210> 4

<211> 454

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Amino acid  
 sequence for heavy chain of recombinant antibody

<400> 4

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala  
 1 5 10 15

Ser Val Met Ile Ser Cys Arg Thr Ser Ala Tyr Thr Phe Thr Glu Asn  
 20 25 30

Thr Val His Trp Val Lys Gln Ser His Gly Glu Ser Leu Glu Trp Ile  
 35 40 45

Gly Gly Ile Asn Pro Tyr Tyr Gly Gly Ser Ile Phe Ser Pro Lys Phe  
 50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr  
 65 70 75 80

Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys  
 85 90 95

Ala Arg Arg Ala Gly Ala Tyr Tyr Phe Asp Tyr Trp Gly Gln Gly Thr  
 100 105 110

Thr Leu Thr Val Ser Ser Ala Lys Thr Thr Pro Pro Ser Val Tyr Pro  
 115 120 125

Leu Ala Pro Gly Cys Gly Asp Thr Thr Gly Ser Ser Val Thr Leu Gly  
 130 135 140

Cys Leu Val Lys Gly Tyr Phe Pro Glu Ser Val Thr Val Thr Trp Asn  
 145 150 155 160

Ser Gly Ser Leu Ser Ser Ser Val His Thr Phe Pro Ala Leu Leu Gln  
 165 170 175

Ser Gly Leu Tyr Thr Met Ser Ser Ser Val Thr Val Pro Ser Ser Thr  
 180 185 190

Trp Pro Ser Gln Thr Val Thr Cys Ser Val Ala His Pro Ala Ser Ser  
 195 200 205

Thr Thr Val Asp Lys Lys Leu Glu Pro Ser Gly Pro Ile Ser Thr Ile  
 210 215 220

Asn Pro Cys Pro Pro Cys Lys Glu Cys His Lys Cys Pro Ala Pro Asn  
 225 230 235 240

Leu Glu Gly Gly Pro Ser Val Phe Ile Phe Pro Pro Asn Ile Lys Asp  
 245 250 255

Val Leu Met Ile Ser Leu Thr Pro Lys Val Thr Cys Val Val Val Asp  
 260 265 270

Val Ser Glu Asp Asp Pro Asp Val Gln Ile Ser Trp Phe Val Asn Asn  
 275 280 285

Val Glu Val His Thr Ala Gln Thr Gln Thr His Arg Glu Asp Tyr Asn  
 290 295 300

Ser Thr Ile Arg Val Val Ser Thr Leu Pro Ile Gln His Gln Asp Trp  
 305 310 315 320

Met Ser Gly Lys Glu Phe Lys Cys Lys Val Asn Asn Lys Asp Leu Pro  
 325 330 335

Ser Pro Ile Glu Arg Thr Ile Ser Lys Ile Lys Gly Leu Val Arg Ala  
 340 345 350

Pro Gln Val Tyr Ile Leu Pro Pro Pro Ala Glu Gln Leu Ser Arg Lys  
 355 360 365

Asp Val Ser Leu Thr Cys Leu Val Val Gly Phe Asn Pro Gly Asp Ile  
 370 375 380

Ser Val Glu Trp Thr Ser Asn Gly His Thr Glu Glu Asn Tyr Lys Asp  
 385 390 395 400

Thr Ala Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Ile Tyr Ser Lys  
 405 410 415

Leu Asn Met Lys Thr Ser Lys Trp Glu Lys Thr Asp Ser Phe Ser Cys  
 420 425 430

Asn Val Arg His Glu Gly Leu Lys Asn Tyr Tyr Leu Lys Lys Thr Ile  
 435 440 445

Ser Arg Ser Pro Gly Lys  
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<210> 5  
 <211> 214  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:Amino acid  
 sequence for light chain of recombinant antibody

<400> 5  
 Glu Asn Val Leu Thr Gln Ser Pro Ala Ile Met Ser Ala Ser Pro Gly  
 1 5 10 15

Glu Lys Val Thr Met Thr Cys Arg Ala Ser Ser Ser Val Ser Ser Ser  
 20 25 30

Tyr Leu His Trp Tyr Arg Gln Lys Ser Gly Ala Ser Pro Lys Leu Trp  
 35 40 45

Ile Tyr Ser Thr Ser Asn Leu Ala Ser Gly Val Pro Ala Arg Phe Ser  
 50 55 60

Gly Ser Gly Ser Gly Thr Ser Tyr Ser Leu Thr Ile Ser Ser Val Glu  
 65 70 75 80

Ala Glu Asp Ala Ala Thr Tyr Tyr Cys Gln Gln Tyr Ser Gly Tyr Arg  
 85 90 95

Thr Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys Arg Ala Asp Ala Ala  
 100 105 110  
 Pro Thr Val Ser Ile Phe Pro Pro Ser Ser Glu Gln Leu Thr Ser Gly  
 115 120 125  
 Gly Ala Ser Val Val Cys Phe Leu Asn Asn Phe Tyr Pro Arg Asp Ile  
 130 135 140  
 Asn Val Lys Trp Lys Ile Asp Gly Ser Glu Arg Gln Asn Gly Val Leu  
 145 150 155 160  
 Asn Ser Trp Thr Asp Gln Asp Ser Lys Asp Ser Thr Tyr Ser Met Ser  
 165 170 175  
 Ser Thr Leu Thr Leu Thr Lys Asp Glu Tyr Glu Arg His Asn Ser Tyr  
 180 185 190  
 Thr Cys Glu Ala Thr His Lys Thr Ser Thr Ser Pro Ile Val Lys Ser  
 195 200 205  
 Phe Asn Arg Asn Glu Cys  
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<210> 6

<211> 462

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Amino acid  
 sequence for heavy chain of recombinant antibody  
 with C-terminal histidine tag sequence

<400> 6

Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys Pro Gly Ala  
 1 5 10 15  
 Ser Val Met Ile Ser Cys Arg Thr Ser Ala Tyr Thr Phe Thr Glu Asn  
 20 25 30  
 Thr Val His Trp Val Lys Gln Ser His Gly Glu Ser Leu Glu Trp Ile  
 35 40 45  
 Gly Gly Ile Asn Pro Tyr Tyr Gly Gly Ser Ile Phe Ser Pro Lys Phe  
 50 55 60

Lys Gly Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr  
 65 70 75 80  
 Met Glu Leu Arg Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys  
 85 90 95  
 Ala Arg Arg Ala Gly Ala Tyr Tyr Phe Asp Tyr Trp Gly Gln Gly Thr  
 100 105 110  
 Thr Leu Thr Val Ser Ser Ala Lys Thr Thr Pro Pro Ser Val Tyr Pro  
 115 120 125  
 Leu Ala Pro Gly Cys Gly Asp Thr Thr Gly Ser Ser Val Thr Leu Gly  
 130 135 140  
 Cys Leu Val Lys Gly Tyr Phe Pro Glu Ser Val Thr Val Thr Trp Asn  
 145 150 155 160  
 Ser Gly Ser Leu Ser Ser Ser Val His Thr Phe Pro Ala Leu Leu Gln  
 165 170 175  
 Ser Gly Leu Tyr Thr Met Ser Ser Ser Val Thr Val Pro Ser Ser Thr  
 180 185 190  
 Trp Pro Ser Gln Thr Val Thr Cys Ser Val Ala His Pro Ala Ser Ser  
 195 200 205  
 Thr Thr Val Asp Lys Lys Leu Glu Pro Ser Gly Pro Ile Ser Thr Ile  
 210 215 220  
 Asn Pro Cys Pro Pro Cys Lys Glu Cys His Lys Cys Pro Ala Pro Asn  
 225 230 235 240  
 Leu Glu Gly Gly Pro Ser Val Phe Ile Phe Pro Pro Asn Ile Lys Asp  
 245 250 255  
 Val Leu Met Ile Ser Leu Thr Pro Lys Val Thr Cys Val Val Val Asp  
 260 265 270  
 Val Ser Glu Asp Asp Pro Asp Val Gln Ile Ser Trp Phe Val Asn Asn  
 275 280 285  
 Val Glu Val His Thr Ala Gln Thr Gln Thr His Arg Glu Asp Tyr Asn  
 290 295 300  
 Ser Thr Ile Arg Val Val Ser Thr Leu Pro Ile Gln His Gln Asp Trp  
 305 310 315 320

Met Ser Gly Lys Glu Phe Lys Cys Lys Val Asn Asn Lys Asp Leu Pro  
 325 330 335

Ser Pro Ile Glu Arg Thr Ile Ser Lys Ile Lys Gly Leu Val Arg Ala  
 340 345 350

Pro Gln Val Tyr Ile Leu Pro Pro Pro Ala Glu Gln Leu Ser Arg Lys  
 355 360 365

Asp Val Ser Leu Thr Cys Leu Val Val Gly Phe Asn Pro Gly Asp Ile  
 370 375 380

Ser Val Glu Trp Thr Ser Asn Gly His Thr Glu Glu Asn Tyr Lys Asp  
 385 390 395 400

Thr Ala Pro Val Leu Asp Ser Asp Gly Ser Tyr Phe Ile Tyr Ser Lys  
 405 410 415

Leu Asn Met Lys Thr Ser Lys Trp Glu Lys Thr Asp Ser Phe Ser Cys  
 420 425 430

Asn Val Arg His Glu Gly Leu Lys Asn Tyr Tyr Leu Lys Lys Thr Ile  
 435 440 445

Ser Arg Ser Pro Gly Lys Gly Gly His His His His His His  
 450 455 460

<210> 7  
 <211> 80  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence:HC 5' coding  
 strand primer RAPHC-5

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 tctgaggtcc agctgcarca 80

<210> 8  
 <211> 80  
 <212> DNA  
 <213> Artificial Sequence

<220>



<223> Description of Artificial Sequence: LC 5'-coding  
strand primer RAPLC-5.

<400> 8

gccaccatgg attttctggt gcagattttc agcttcttgc taatcagtcg ctcagttgca 60  
atgtccagag gagaaaatgt 80

<210> 9

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:HC 3'  
non-coding strand primer

<400> 9

ctaagctcat ttaccggag accg 24

<210> 10

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:LC 3'  
non-coding strand primer

<400> 10

ctcaggacct ttgtctctaa cactc 25

<210> 11

<211> 62

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:HC His 5'  
coding strand primer

<400> 11

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<210> 12

<211> 62

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:HC His 5'  
non-coding strand primer

<400> 12

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ag 62